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## SOME FACTS REGARDING VOCATIONAL TRAINING AMONG THE ANCIENT GREEKS AND ROMANS

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Greek literature affords little information regarding the technical education of the craftsman. This is probably due not only to the relative simplicity of the Greek industrial system but to the influence of slavery in bringing the manual arts into disrepute. The prejudice in the minds of the educated classes against manual labor finds expression in the writings of even the profoundest thinkers.

No low mechanic [says Aristotle] ought to be admitted to the rights of a citizen, nor any other sort of people whose employment is not productive of virtue.<sup>1</sup>

In Plato's ideal republic the artisans constitute a distinctly inferior class, unfitted for war or the pursuit of science.<sup>2</sup> Xenophon attempts a somewhat detailed explanation of the ill repute in which the handicrafts are held.

The arts that are called mechanical are also, and naturally enough, held in bad repute in our cities. For they spoil the bodies of workers and of superintendents alike, compelling them to lead sedentary, indoor lives, and in some cases even to pass their days by the fire. And as their bodies become effeminate, so do their souls become less robust. Besides this, in such trades one has no leisure to devote to the care of one's friends or of one's city. So that those who engage in them are thought to be bad backers of their friends and bad defenders of their country.<sup>3</sup>

How opinions such as these affected the attitude of their possessors toward vocational training in the industries is well illustrated in the writings of Plato. For him the only education worthy of the name is liberal education,

that education in virtue . . . which makes a man eagerly pursue the ideal perfection of citizenship, and teaches him how rightly to rule and how to

<sup>1</sup> *Politics* 7, 9.

<sup>3</sup> *Economics* 4, 3.

<sup>2</sup> *Republic* 468A, 590C.

obey. . . . This is the only training which upon our view would be characterized as education; that other sort of training which aims at the acquisition of wealth or bodily strength, or mere clearness apart from intelligence and justice, is mean and illiberal and is not worthy to be called education at all.<sup>1</sup>

Yet the views on this subject of these writers may easily give one a distorted impression of the attitude of the Greeks as a whole toward the industrial arts. Socrates belonged to and lived in hearty sympathy with the working class. So frequently did he in his discourses draw upon the workingman's sphere of life for illustrative material that the aristocratic Critias, a former disciple, felt called upon to rebuke him.<sup>2</sup> Neither Pericles nor Thucydides is unmindful of the worth and dignity of labor.

To avow poverty [says the former in the funeral oration] is no disgrace; the true disgrace is in doing nothing to avoid it. An Athenian citizen does not neglect the state because he takes care of his own household; and even those who are engaged in business have a very fair idea of politics.

Notwithstanding, however, the occasional recognition of the honest craftsman and his work, the picture which the literature of the Greeks enables us to form of their methods of industrial education is fragmentary and obscure. And this is even more true of Roman literature. Nevertheless, in view of the efforts made at present to correlate the vocational training of the craftsman and the operative with the liberal curriculum, which is to some extent an inheritance from the Greeks and the Romans, it may be worth while to make a brief survey of what is known of the opinions and practices of these ancient peoples themselves in regard to the vocational education, especially of the laboring classes.

During the sixth and fifth centuries B.C. the industrial life of the people of Athens was undergoing changes similar in some respects to those which constitute the modern industrial revolution. Inasmuch as the niggardly soil of Attica was unable to compete with that of more favored regions in the production of fruits and grains, while on the other hand the pottery, the textile fabrics, and other manufactures of Athens found an ever-increasing market, the energies of the people were diverted more and more from agricul-

<sup>1</sup> *Laws* 643E, 644.

<sup>2</sup> Xenophon *Memorabilia* 1, 2, 37.

tural to industrial pursuits. Large numbers of the people withdrew from the country into the workshops of the city. Plutarch tells us that Solon,

observing that the city was filled with persons who flocked from all parts into Attica for security of living, and that most of the country was barren and unfruitful, and that traders at sea imported nothing in exchange, turned his citizens to trade, and made a law that no son should be obliged to relieve a father who had not bred him up to any calling.

Under the pressure of competition and increasing demand a more economical organization of labor was brought about. The processes of manufacture were divided and subdivided.<sup>1</sup> Workshops developed into factories. Labor became more highly specialized, of course, in the larger centers of industry. Xenophon refers to the high degree of specialization attained in the manufacture of shoes.

In great cities, because there are numbers that want each particular thing, one art alone suffices for the maintenance of each individual; and frequently, indeed, not an entire art, but one man makes shoes for men, and another for women; sometimes it happens that one gets a maintenance merely by stitching shoes, another by cutting them out, another by cutting out upper leathers only, and another . . . by simply putting together the pieces.<sup>2</sup>

The industrial situation must have been further complicated by the fact that the working population was made up of three quite distinct classes—the poorer citizens, the aliens, and the slaves. The changes above mentioned resulted in a large increase in the last class.<sup>3</sup> Many were employed in the household and in various menial and laborious occupations, but some were employed also in crafts requiring skill and intelligence. It was not uncommon for an owner to allow his slaves to seek work for themselves. In such cases they paid their master a fixed sum at regular intervals and maintained themselves from the residue of their earnings. Sometimes the slaves were hired out to a contractor or manufacturer. Sometimes the owner employed them in his own factory.

Under conditions such as these, this ancient industrial revolution must have given rise to many problems, social and, possibly,

<sup>1</sup> Müller, *Handbuch der klassischen Altertumswissenschaft*, IV, i, 2, p. 244.

<sup>2</sup> Xenophon *Cyropaedia*, viii. 2.

<sup>3</sup> Müller, *Handbuch der klassischen Altertumswissenschaft*, IV, i, 2, pp. 249-50.

educational. At any rate, notwithstanding the meagerness of the information on the subject which the Greeks afford us, we can at least say that they seem to have taken the matter of vocational education quite seriously. Early in the sixth century, Solon, as we have seen, framed for the Athenians laws which enjoined upon parents the duty of providing for the vocational training of their sons. A passage in Xenophon<sup>1</sup> shows that when a parent handed over his boy to a master artisan for training in a craft the duties of the latter as an instructor were specifically mentioned in a written agreement. Notwithstanding Plato's low estimate of the educational value of vocational training,<sup>2</sup> he is one of the first to recommend that attention be paid to the vocational training of those who are still in early childhood. In the methods which he recommends he strangely anticipates those of both the kindergarten and the "kitchen garden."

According to my view, he who would be good at anything must practice that thing from his youth upwards, both in sport and in earnest, in the particular way which the work requires; for example, he who is to be a good builder should play at building children's houses; and he who is to be a good husbandman, at tilling the ground; those who have the care of their education should provide them when young with mimic tools, and they should learn beforehand the knowledge which they will afterward require for their art. For example, the future carpenter should learn to measure or apply the line in play, and the future warrior should learn riding or some other exercise for amusement, and the teacher should endeavor to direct the children's inclinations and pleasures by the help of amusements to their final aim in life. The sum of education is right training in the nursery. The soul of the child in his play should be trained to that sort of excellence in which, when he grows up to manhood, he will have to be perfected.<sup>3</sup>

Learning a trade was considered a matter of some difficulty.

But truly, Socrates, [says an interlocutor]<sup>4</sup> it is not with tillage as with the other arts, where the learner must be well-nigh worn out beneath a load of study before his prentice hand can turn out work of worth sufficient merely to support him.

The discipline to which the apprentice was subjected seems to have been severe. Lucian hints at the fatigues, blows, and fears falling to the lot of the learner.<sup>5</sup>

<sup>1</sup> *Revenues* 2, 2.

<sup>4</sup> Xenophon *Economics* 15, 10.

<sup>2</sup> *Laws* 643, 644.

<sup>5</sup> *Parasite* 13.

<sup>3</sup> *Ibid.* 643.

The Greek craftsman, like the mediaeval teacher,<sup>1</sup> seems to have afforded proof of his fitness for his calling by giving the name of his teacher or respondent.

If upon consideration we found that we had had good and eminent masters, and had been successful in building, not only with their assistance, but without them, by our own unaided skill—in that case prudence would not dissuade us from proceeding to the construction of public works. But if we had no master to show, and no building, or many of no worth, then surely it would be ridiculous in us to attempt public works.<sup>2</sup>

Plato gives as one of his reasons for deploring poverty among artisans the fact that if poor they will be unable to provide themselves with the tools and instruments essential to good work and to the proper technical instruction of their sons and apprentices.<sup>3</sup>

It was quite common for fathers to train their sons in the craft which they themselves practiced. Plato states that “the sons of the craftsmen learn their father’s trade so far as their father and his friends can teach it.”<sup>4</sup> “Did you never notice,” he says in another place, “how the potter’s boys look on before they touch the wheel? And shall potters be more careful in educating their children and in giving them the opportunity of seeing and practicing their duties than our guardians will be?”<sup>5</sup>

A passage in Lucian<sup>6</sup> has been interpreted as indicating that the master workman received a fee for instructing his apprentice.<sup>7</sup> After pointing out various differences between the parasitic and the other arts, Lucian says, “and, as it seems we learn the other arts, paying a fee” (*καὶ ὡς ἔοικεν, ἄλλας τέχνας μανθάνομεν μισθὸν δίδοντες*). A careful examination of the passage shows, however, that Lucian means not all but some of the arts, and that he has in mind the liberal arts such as music, rhetoric, and philosophy.<sup>8</sup>

It is not likely that school or class methods were employed in training in the industrial arts. When Socrates speaks of “competent instructors” (*διδασκάλων ἱκανῶν*) in the mechanical arts<sup>9</sup>

<sup>1</sup> Compayré, *Abelard*, 142.

<sup>4</sup> *Protagoras* 328A.

<sup>2</sup> Plato *Gorgias* 514B.

<sup>5</sup> *Republic* 467A.

<sup>3</sup> *Republic* 421D.

<sup>6</sup> *Parasite* 18.

<sup>7</sup> For instance, by Wallon, *Histoire de l'esclavage dans l'antiquité*, I, 150, note 3.

<sup>8</sup> Mauri, *I cittadini lavoratori dell' Atica*, p. 23.

<sup>9</sup> Xenophon *Memorabilia* 4, 2, 2.

he probably has in mind not special teachers of the crafts but ordinary master workmen.

Yet something resembling a school system of instruction and training seems to have been employed in certain crafts, especially those connected with the household. Aristotle states that a slave at Syracuse taught others for a stipulated sum the entire business of a household. He goes on to say that "the learning of such matters as these would seem to be of wide extent, as the art of cookery and such like services."<sup>1</sup> The art of cookery is one in which mere skill of hand, which ordinary apprenticeship is so well fitted to develop, counts perhaps for less than that knowledge of facts and principles which can be more readily imparted through systematic instruction. At any rate young cooks seem to have resembled students rather than apprentices. The slave instructor in Pherecrates' comedy of that name is a professional instructor in the art of cooking. Writers of Greek comedy were wont to make merry over the preoccupation of the professional cooks of their time with the scientific principles underlying their art.<sup>2</sup> In a play by Nichomachus, a professor of the culinary art enlarges upon the amount of scientific study which he who would be a really competent cook must undertake. The professional course which he proceeds to outline includes not only natural history and medicine but also geometry and astronomy.<sup>3</sup> Athenian cooks were not necessarily domestics. Many of them were craftsmen whose expert services could be engaged by the day. "They had," says Symonds, "their schools, their libraries of culinary lore, their pedantries and pride." It is perhaps well to recall in this connection that in Rome systematic instruction was provided for cooks as well as for rhetoricians, geometers, and others. Columella complains of the fact that no similar provision was made for instruction in agriculture.

Adhuc enim scholas rhetorum, et, ut dixi, geometrarum musicorumque, vel quod magis mirandum est, contemptissimorum vitiorum officinas, gulosius condiendi cibos, et luxuriosius fercula struendi, capitumque et capillorum concinnatores non solum esse audiui, sed et ipse vidi. Agricolationis neque doctores qui se profiterentur, neque discipulos cognovi.<sup>4</sup>

<sup>1</sup> *Politics* 1, 7.

<sup>2</sup> Symonds, *Greek Poets*, II, 210-11.

<sup>3</sup> Symonds, *Greek Poets*, loc. cit.; Rankin, *The Rôle of the Μάγειροι*, etc., pp. 77-78.

<sup>4</sup> *De re rustica* I, *Praef.* 5, 6.

The problem of the correlation of liberal with industrial education probably did not exist for the ancient Greeks. Those who received a liberal education did not as a rule engage in industrial pursuits. If in Hippias of Elis we find a man who had mastered not only the liberal but also several of the industrial arts, his is only the exception which proves the rule. The Greeks no doubt felt, as did Cicero,<sup>1</sup> that he went a little too far. Plato expresses himself as opposed not only to attempts to give the same person an industrial as well as a liberal education but to attempts to master more than one of the industrial arts.

Now of artisans let the regulations be as follows. In the first place, let no native or servant of a native be occupied in the handicraft arts; for a citizen who is to make and preserve the public order of the state has an art which requires much study and many kinds of knowledge, and does not admit of being made a secondary occupation; and hardly any human being is capable of pursuing two professions or two arts rightly, or of practicing one art himself and superintending some one else who is practicing another. Let this then be our first principle in the state; no one who is a smith shall also be a carpenter, and if he be a carpenter he shall not superintend the smith's art rather than his own.<sup>2</sup>

The literature of the Romans affords even less information regarding the education of the working classes than does that of Greece. As among the Greeks, the laboring population was composed of freemen and of slaves together with an intermediate class of emancipated slaves or freedmen.

A characteristic of Roman industrial life is the number and the prominence of the corporations of workingmen, the *collegia*. Their purposes seem to have been mainly political, social, or religious, rather than educational.

One may believe [says Waltzing]<sup>3</sup> that the *collegia*, in bringing men together and in multiplying and drawing closer the ties that united them, contributed, even in the absence of any regulation or constraint, to improve, maintain, and transmit technical skill, to accelerate progress, and perhaps to render traditional in certain localities the exercise of certain trades; but it is impossible to prove this.

The mastery of a trade was acquired regularly through a course of apprenticeship. Inscriptions on the walls at Pompeii indicate

<sup>1</sup> *De oratore* iii. 32.

<sup>2</sup> *Laws* 846, 847.

<sup>3</sup> *Les corporations professionnelles*, I, 184.



that the apprentices had some sort of organization among themselves. One of the public announcements relative to the city elections was written by them; another is signed by a citizen named Saturninus "together with his apprentices."<sup>1</sup>

The apprentices seem to have been younger than is the case with us. The epitaph upon the tomb of one, a slave who died at the age of twelve, informs us that "he was the joy of his master and the pleasing hope of his parents. With his trained hand he knew well how to fashion jeweled necklaces and to place all kinds of gems in a golden setting":

quicumque es, puero lacrymas effunde, viator.  
bis tulit hic senos primoevi germinit (sic) annos.  
deliciumque fuit domini, spes grata parentum,  
quos male deseruit longo post fata dolori.  
noverat hic docta fabricare monilia dextra,  
et molle in varias aurum disponere gemmas.  
nomen erat puero Pagus; ac nunc funus acerbum,  
et cinis in tumulis jacet et sine nomine corpus,  
qui vixit an. XII, menses VIII, diebus XIII, nov. VII.<sup>2</sup>

A passage in Columella quoted above shows that Rome possessed institutions for giving systematic instruction and training in at least some of the industrial arts. Lampridius informs us that lecture-halls were erected for architects and mechanics as well as for others.<sup>3</sup>

Though the literary and other records of ancient Rome give us extremely little information as to the manner in which instruction and training in the handicrafts were carried on, they do throw some light upon the development of methods of preparation for the vocations distinguished by us as professions. Up to the close of the republican period the orator, the lawyer, and the physician were trained under the apprenticeship system just as was the carpenter or the tanner. But where vocational preparation consists to a considerable degree in the mastery of facts and principles the advantages of school methods of instruction are likely to be recognized and adopted; and such was the case with instruction and

<sup>1</sup> Friedländer, *Roman Life*, pp. 152-56.

<sup>2</sup> Quoted in Wallon, *Histoire de l'esclavage*, III, p. 502, note.

<sup>3</sup> *Alexander Severus* 44.

training for the professions. As applied to the training of the orator the newer school methods did not meet with universal approval. Tacitus prefers the older apprenticeship system. He insists that instruction should not be separated from actual practice:

The practice of our ancestors was agreeable to this theory. The youth who was intended for public declamation was introduced by his father, or some near relation, with all the advantages of home discipline and a mind furnished with useful knowledge, to the most eminent orator of the time, whom thenceforth he attended upon all occasions. . . . On the other hand, our modern youth are sent to the mountebank schools of certain declaimers called rhetoricians . . . where it is hard to determine whether the place, the company, or the method of instruction is most likely to infect the minds of young people and produce a wrong turn of thought.<sup>1</sup>

Among the Greeks knowledge of the art of medicine was handed down from father to son in certain families belonging to the guild of the Asclepiads.<sup>2</sup> In Rome the art seems to have been left at first largely in the hands of foreigners. It was acquired usually through a period of training as an apprentice, but in Martial's time something approximating to class instruction was employed. He tells us that on one occasion when he was ill the attending physician allowed every one of his numerous disciples to make an independent examination—in other words, the latter were given something closely resembling modern clinical instruction:

I was feeling somewhat indisposed; but you, Symmachus, came immediately with a hundred disciples; a hundred hands congealed in the north wind touched me; before you came, Symmachus, I had no fever, but now I have one.<sup>3</sup>

Friedländer quotes a passage making mention of medical sophists "sitting high on chairs and overwhelming their hearers with abstruse lore."<sup>4</sup> Theodosius and Valentinian III seem to have been the first to establish professorships of medical science.

The profession of the jurisconsult resembled in earlier times that of the physician in that it was frequently handed down from father to son, the latter serving as an apprentice, but, as was the case with the other professions, school methods of vocational preparation

<sup>1</sup> *Dialogi de oratoribus* 34, 35.

<sup>3</sup> *Epigrammata* v. 9.

<sup>2</sup> Plato *Republic* 406, 599D.

<sup>4</sup> *Roman Life*, p. 179.

were later employed. Up to the time of Cicero lawyers of experience and reputation, says Gibbon,

seated themselves at home, to expect with patient gravity the visits of their clients. . . . The duties of social life and the incidents of judicial proceeding were the ordinary subjects of these consultations, and the verbal or written opinion of the jurisconsults was framed according to the rules of prudence and law. The youths of their own order and family were permitted to listen; their children enjoyed the benefit of more private lessons, and the Mucian race was long renowned for the hereditary knowledge of the civil law.

From the time of Cicero on the school system of training came into vogue.

A system was formed, schools were instituted, books were composed, and both the living and the dead became subservient to the instruction of the young.<sup>1</sup>

In the professional training of teachers this change from the apprenticeship to the school system does not seem to have taken place. Under Marcus Aurelius, however, the appointment of teachers to chairs of rhetoric or philosophy was made conditional upon their passing a strict examination.<sup>2</sup>

That school instruction constituted a part of the professional preparation of the architect in the third century A.D. is indicated in a decree by Diocletian issued in 301, in which teachers of architecture are mentioned. Lampridius states that the emperor Alexander Severus fixed salaries and decreed the erection of lecture-halls (*auditoria*) not only for grammarians, rhetoricians, and physicians, but also for architects and mechanics.<sup>3</sup>

Perhaps the most striking difference between our attitude toward industrial training and that of the ancient Greeks is the absence of appreciation on the part of the latter of its value as a part of a liberal education. Notwithstanding the careful attention they paid to vocational training in the manual arts and crafts, they seem to have considered its influence harmful rather than otherwise, at least so far as the higher intellectual life is concerned. So much the more strange does it seem to find them anticipating some of our most advanced ideas regarding vocational training—the

<sup>1</sup> *The Decline and Fall of the Roman Empire*, chap. xlv.

<sup>2</sup> Denk, *Geschichte des gallo-fränkischen Unterrichts- und Bildungswesens*, pp. 68–69.

<sup>3</sup> *Alexander Severus* 44.

utilization to this end of the play impulses of children, and the careful adaptation from the beginning of the matter and method of instruction to the pupil's future vocational needs.

The references to vocational training found in the records of ancient Roman life are of interest chiefly for the examples they afford us of transition from the apprenticeship to the school system. This transition seems to have occurred first in what are known as the professional vocations, those involving intellectual rather than manual labor. By the fourth century A.D. architects and mechanicians seem to have been trained at least in part by school methods.